We investigated the role of the salicylic acid (SA) signaling pathway in defense responses of tomato plants to the herbivore, cotton bollworm. After exposure to the cotton bollworm, tomato leaves rapidly accumulated a high level of SA. The transcription of \textit{PR1} and \textit{BGL2} genes, the marker genes of SA pathway, was up-regulated. An enhanced endogenous SA level was accompanied by an increase in the endogenous \textit{H}_2\textit{O}_2 level as compared with controls. Spraying tomato plants with a solution containing either SA or methyl salicylic acid (Me-SA), the \textit{H}_2\textit{O}_2 level dramatically increased. These data proved that the SA pathway was involved in the tomato plant defense responses to the herbivore.

\textit{Key words: Lycopersicon esculentum, Salicylic Acid Pathway, Plant Defense Response}